APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

68482

S/126/60/009/01/009/031
E111/E191

24.7600

AUTHOR: Zotov, T.D.

TITLE: Temperature Dependence of Changes in Electrical Resistance of Magnetite Single Crystals in a Magnetic Field at Low Temperatures

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 1, pp 48-52 (USSR)

ABSTRACT: The author carried out the work described to supplement the meagre published information on the influence of temperature on the electrical resistivity changes in a magnetic field in the low-temperature magnetic transformation range of magnetite. Single crystals, previously subjected to cooling below the low-temperature transformation in a magnetic field, were studied in the temperature range 78-213 °K. The Kosoy-Brod magnetite crystals were shown to be of almost stoichiometric composition (main impurity 0.01-0.3% Ti), and without static lattice distortion. Two rods 1.33 mm in diameter and 7.0 and 6.0 mm long were cut from a regular crystal with their axes in the [100] direction and leads were spark-welded on. Temperature was measured with a copper-

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S/126/60/009/01/009/031
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Temperature Dependence of Changes in Electrical Resistance of Magnetite Single Crystals in a Magnetic Field at Low Temperatures

constantan couple. Before the test the specimen was cooled to liquid-nitrogen temperature in a longitudinal or transverse field of 10 000 Oe or without a field, and then demagnetized. Electrical resistivity measurements were effected during heating at 2 °C per hour in a 20 000 Oe field. Fig 1 shows the relative change in resistivity (continuous line) and the resistivity in a longitudinal field as functions of temperature for a specimen cooled without a magnetic field. The corresponding relative-change curve for the specimen cooled in a longitudinal field is shown in Fig 2. Figs 3 and 4 show the relative-change curves with a transverse field for specimens cooled in a transverse field and without a field, respectively. All the curves of relative change in resistivity show minima at 111.5 and 95 °K. The author attributes these effects to preferential scattering of conduction electrons by fluctuations of different types and discusses some reported related effects (Refs 10, 11 and 12).

Card 2/3

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68182

S/126/60/009/01/009/031
E111/E191

Temperature Dependence of Changes in Electrical Resistance of Magnetite Single Crystals in a Magnetic Field at Low Temperatures

There are 4 figures and 12 references, of which 6 are Soviet and 6 English.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Physics of Metals, Acad.Sci. USSR)

SUBMITTED: August 16, 1959

Card 3/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

L 1717-66 EPF(c)/EWT(m)/EWP(b)/T/EWP(w)/EWP(t) IJP(c) JD/JG

ACCESSION NR: AP5021944 UR/0126/65/020/002/0308/0309
539.292:538.114

50
49
B

AUTHOR: Samokhvalov, A. A.; Bamburov, V. G.; Volkenshteyn, N. V.; Zotov, T. D.; Ivakin, A. A.; Morozov, Yu. N.; Simanova, M. I.

TITLE: Magnetic properties of Eu_3O_4

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 2, 1965, 308-309

TOPIC TAGS: magnetization, saturation magnetization, temperature dependence, Curie temperature, Weiss-Forrer method, magnetic moment, europium compound

ABSTRACT: To elucidate the magnetic properties of Eu_3O_4 the authors measured the temperature dependence of magnetization in the presence of different magnetizing fields at temperatures of upward of 1.65°K and thus determined for the first time the principal magnetic characteristics of Eu_3O_4: saturation magnetization σ_s and Curie temperature T_C. The measurements were performed with the aid of a pendulum magnetometer. The external magnetic field in the measurements reached 10,000 oe, which sufficed to bring the specimen to magnetic saturation. Through extrapolation from the set of curves $\sigma(H, T)$ to $H = \infty$ the saturation magnetization σ_s was found

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ACCESSION NR: AP5021944

to be 89.4 gauss·cm^3/g. From the same curves, using the Weiss-Forrer method of lines of equal magnetization, the authors found the Curie temperature, which proved to be 7.8°K. With its relatively large magnetic moment and low Curie point, this oxide appears a suitable means of verifying the spin-wave theory. Verification of this theory showed that the linear T^2-dependence of saturation magnetization exists throughout a broad temperature range (from 1.65 to 4.6°K) (0.6 T_c). The same dependence is also observed for a number of uncompensated antiferromagnetics and for certain rare earths. Orig. art. has: 1 figure.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Metal Physics, AN SSSR)

SUBMITTED: 20Oct64 ENCL: 01 SUB CODE: IC, EM

NO REF SOV: 000 OTHER: 004

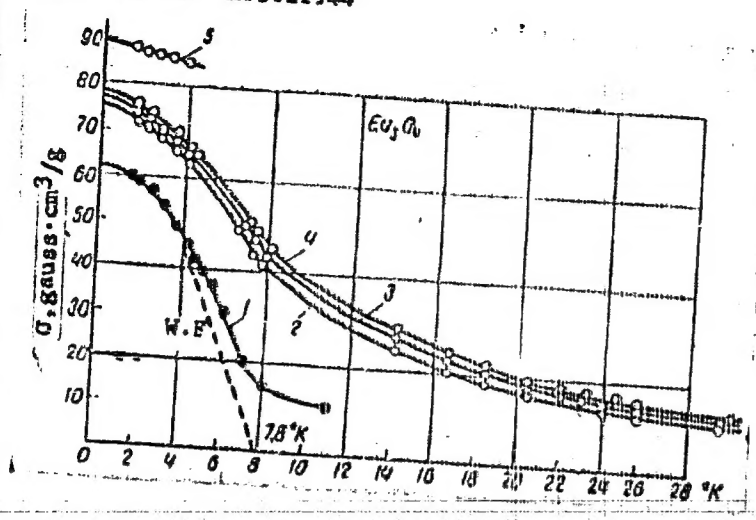
Card 2/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

L 1717-66

ACCESSION NR: AP5021944

ENCLOSURE: 01



Temperature dependence of Eu_3O_4 in the presence of different fields:

1 - H = 0; 2 - H = 15,200 oe; 3 - H = 17,300 oe; 4 - H = 10,400 oe; 5 - H = ∞; broken line denotes the magnetization curve plotted by the Weiss-Forrer method

Card 3/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

L 07101-67 EWT d)/EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AW

ACC NR: AP6029113 SOURCE CODE: UR/0048/66/030/006/0979/0980

AUTHOR: Volkenshteyn, N.V.; Zotov, T.D.

ORG: Institute of Metal Physics, Academy of Sciences, SSSR (Institut fiziki metallov Akademii nauk SSSR)

TITLE: Investigation of the temperature dependence of the spontaneous magnetization of a magnetite single crystal at low temperatures [Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 979-980

TOPIC TAGS: spontaneous magnetization, ferrite, single crystal, temperature dependence, low temperature effect, spin wave theory

ABSTRACT: The authors have employed a pendulum magnetometer of the type described by Domenikali (Rev. Sci. Instrum., 21, 327 (1950)) to measure the spontaneous magnetization of a natural magnetite single crystal at temperatures from 4.2 to 50° K. The 19.3 kOe external magnetic field was more than adequate to insure saturation of the spherical specimen. The main impurity of the specimen was 0.1 to 0.3% titanium, and x-ray studies down to liquid nitrogen temperatures revealed no static lattice deformations. The specimen was cooled through the 111° K transition temperature in an external magnetic field parallel to [100] and the measurements were made with the field in that direction. The spontaneous magnetization M(T) at temperature T was

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L 07101-67

ACC NR: AP6029113

found to be well represented by the formula $M(T)/M(0) = 1 - \alpha T^n$ with $n = 3/2$ and $\alpha = 3.5 \times 10^{-5}$ $deg^{-3/2}$, which does not conflict with the spin wave theory of the spontaneous magnetization of ferrites. The experimental data exclude the possibility that $n = 2$ in the above formula. The authors thank A.P.Pronina for assisting with the work. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20 DATE SUBM: 00 ORIG. REF: 008 OTH REF: 003

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

L 06425-67 EWT(d)/EWT(1)/EWT(m)/EWP(w)/EWP(t)/ETI JD/WW/JG

ACC NR: AP6026700 SOURCE CODE: UR/0181/66/008/008/2450/2454

44
B

AUTHOR: Samokhvalov, A. A.; Bamburov, V. G.; Volkenshteyn, N. V.; Zotov, T. D.; Ivakin, A. A.; Morozov, Yu. N.; Simonova, M. I.

ORG: Institute of Metal Physics, AN SSSR, Sverdlovsk (Institut fiziki metallov AN SSSR)

TITLE: Magnetic properties of EuO at low temperatures

SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2450-2454

TOPIC TAGS: europium compound, spontaneous magnetization, magnetic susceptibility

ABSTRACT: EuO was prepared by the solid-state reaction $Eu_2O_3 + C \rightarrow 2EuO + CO$, and its magnetization curves were plotted for 4.2, 20.4 and 82°K. The temperature dependence of spontaneous magnetization was measured at 1.7°K and above, and was analyzed from the standpoint of the spin-wave theory. At 4.2 and 20°K, the magnetization reaches saturation in fields slightly above 4000 Oe. The paramagnetic Curie point and the effective magnetic moment, both determined from the temperature dependence of the magnetic susceptibility, were found to be 75°K and 7.3 μ_B respectively. The exchange integral I was calculated from the low-temperature range ($T < T_c/2$) and found to be equal to 0.394k. It is shown that when the term with $T^{5/2}$ is taken into account in Bloch's law, the range of applicability of Bloch's law expands, but the value of coefficient C_1 at $T^{5/2}$, determined experimentally and giving the best agreement with the experi-

Card 1/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

L 08425-67

ACC NR: AP6026700

mental spontaneous magnetization curve, differs markedly from the calculated value. Orig. art. has: 4 figures, 1 table and 3 formulas.

SUB CODE: 20/ SUBM DATE: 10Nov65/ ORIG REF: 002/ OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

L 07216-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6029115 SOURCE CODE: UR/0048/66/030/006/0984/0989

AUTHOR: Smokhvalov, A.A.; Ivakin, A.A.; Morozov, Yu.N.; Simonova, M.I.; Bamburov, V.G.; Volkenshteyn, N.V.; Zotov, T.D.

ORG: none

TITLE: Magnetic, high frequency, and electric properties of some oxide compounds of divalent europium (Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk)

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 984-989

TOPIC TAGS: ferromagnetism, dielectric constant, dielectric loss, magnetization, temperature dependence, europium compound, oxide, aluminate, silicate, ELECTRIC PROPERTY, MAGNETIC PROPERTY

ABSTRACT: The authors have synthesized EuO, Eu_3O_4, $Eu_3Al_2O_6$, $EuAl_2O_4$, Eu_2SiO_4, and two series of solid solutions containing EuO and CaO, or EuO, CaO, and Eu_2O_3, and have investigated their magnetic and electric properties. The investigation was undertaken because the high magnetization of divalent europium compounds make them of interest in connection with technical applications and the simple crystal structure of EuO makes it a suitable material with which to compare the predictions of theories of ferromagnetism. The magnetization measurements were made with a Domenikali type pendulum magnetometer in fields up to 10 kOe and at temperatures down to 1.6° K. The ferro- and paramagnetic resonance of EuO was investigated at 9 and 35.7 kMHz down to 4.2°K,

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ACC NR: AP6029115

and of the other materials, at room temperature. The dc electrical properties of the materials were investigated and their ultrahigh frequency complex dielectric constants were measured with a resonant cavity technique. Some of the measurement results are presented graphically and others are discussed briefly. The saturation magnetization of EuO, extrapolated to infinite field and 0° K, was found to be 232 Gs cm^3/g. The saturation magnetization of Eu_3O_4 was approximately one-third that of EuO, indicating that the ferromagnetic properties of Eu_3O_4 are due to the divalent Eu ion. The low temperature spontaneous magnetization of EuO was a linear function of $T^{3/2}$, and not of T^2, whereas that of Eu_3O_4 and of the solid solutions containing it was a linear function of T^2, and not of $T^{3/2}$. The aluminates and silicate had a g factor (determined by paramagnetic resonance) of 2, as did EuO, and their spontaneous magnetizations followed the $T^{3/2}$ law. The ultrahigh frequency conductivity of EuO was found to be approximately 5×10^{-3} ohm^{-1} cm^{-1}, which is some six orders of magnitude higher than the dc conductivity. It is suggested that the same ultrahigh frequency dielectric loss mechanism is active in EuO as in the 3d transition metals. Other results than those listed above are presented. The authors thank S.V.Vonsovskiy for his interest and advice. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 001 OTH REF: 006

Card 2/2 eqf

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, T.D.

Specific electric resistance of natural magnetite single crystals. Kristallografiia 9 no.6:929-930 N-D '64. (MIRA 18:2)

1. Institut fiziki metallov AN SSSR.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.; SHEREMET, A.

Production and finance. Fin. SSSR 37 no.7:53-61 Jl '63. (MIRA 16:8)

(Moscow Province--Industrial management) (Moscow Province--Finance)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

MIKOYAN, A; PODGORNYY, N.; ZOTOV, V.; PAVLOV, D.; DUDIN, Yu.; KOROLEV, D.; MASTEROV, N.; NEVSKIY, Ye.; KLEMENCHUK, A.; ARSENT'YEV, V.; GAVRILOV, A.; PARSHIKOV, M.; ZHARSKIY, A.; SOKOLOVSKIY, V.

Vladimir Evdokimovich Chalyi; obituary. Kons.i ov.prom. 17 no.12: 48 D '62. (MIRA 15:12)

(Chalyi, Vladimir Evdokimovich, 1905-1962)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.

For further progress in the meat industry. Miasn.ind. SSSR 31 no.6:1-3 '60. (MIRA 13:12)

1. Zamestitel' predsedatelya Gosplana SSSR.
(Meat industry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.

Irkutsk Veterinary Research Station. Trudy VIEV 23:374-375 '59.
(MIRA 13:10)

(Irkutsk--Veterinary research)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V., starshiy nauchnyy sotrudnik

Felt that is not made of wool. Prom.koop. 14 no.8:20 Ag '60. (MIRA 13:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut shersti, Moskva.

(Felt)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.

Manufacture of consumers' goods in the seven-year plan.
Sov.torg. 33 no.3:3-13 Mr '60. (MIRA 13:6)

1. Zamestitel' predsedatelya Gosplana SSSR.
(Russia--Manufactures) (Food industry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.

Seven-year plan for the meat industry. Mias. ind. SSSR 29 no.6: 1-4 '58. (MIRA 11:12)

1.Zamestititel' predsedatelya Gosplana SSSR.
(Meat industry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

LYASHENKO, V., ZOTOV, V., IVANOV, V., and ANDREYEV, V.

"Corrosion Resistance of Certain Materials in Sodium and Lithium."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.

A "chicken war." Vnesh. torg. 43 no.1:24-25 '64.
(MIRA 17:2)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.; YERSHOVA, I., red.; IVANOV, N., tekhn. red.

[Guide to the K.E.TSiolkovskii Residence Museum]
Putevoditel' po domu-muzeiu K.E.TSiolkovskogo. Kaluga,
Kaluzhskoe knizhnoe izd-vo, 1961. 81 p. (MIRA 17:3)

1. Kaluga. Dom-muzey K.E.TSiolkovskogo.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

KOSYGIN, A.; NOVIKOV, V.; MURAV'YEVA, N.; ZOTOV, V.; AKIMOV, I.; SPORYSHEV, V.; KOLOSOVA, V.; CHESNOKOV, N.; NEFEDOVA, O.; BOGAYEVA, A.; PIKOVSKIY, G.; KARMANOV, M.; SIYTAM, Ye.; KHODAKOVA, S.; KUSHNER, P.; BLYAKHMAN, I.; BASSIAS, L.; KINESHEMTSEVA, A.; REZNIKOV, M.; KALININ, S.; MILANOVA, D.; VENGEROVA, R.; AGROSKINA, M.; RATNER, B.; NARODETSKIY, B.; MARKOVA, L.; GOLUBENKOVA, N.; TSEKHANSKAYA, S.; TERENT'YEVA, N.; NESTEROVA, S.; AKSENOV, S.

D.M.Khazan-Andreeva; obituary. Tekst.prom. 21 no.12:90 D '61. (MIRA 15:2)
(Khazan-Andreeva, Dora Moiseevna, 1894-1961)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.

Fight for high quality and greater quantity. Miasn. ind. SSSR 29 no.1:1-5 '58. (MIRA 11:3)

1.Ministr SSSR, zamestitel' predsedatelya Gosplana SSSR.
(Meat industry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

AMSTISLAVSKIY, D.M.; KOVALEVSKIY, S.Ye.; ZOTOV, V.A.

Automatic temperature measurement in control heating flues of coke ovens. Koks i khim. no.1:35-39 '58. (MIRA 11:2)

1. Zhdanovskiy koksokhimicheskiy zavod.
(Coke ovens) (Pyrometers and pyrometry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

AVIROM, S.M., kand. tekhn.nauk, nauchn. sotr.; GLOTSER, L.I., kand. tekhn.nauk, nauchn. sotr.; GORELIK, S.A., kand. tekhn. nauk, nauchn. sotr.; LEYTES, L.G., kand. tekhn. nauk, nauchn. sotr.; PLATONOVA, Ye.I., nauchn. sotr.; [illegible], kand. tekhn. nauk, nauchn. sotr.; Prinyali uchastiye: ZOTOV, V.A., nauchn. sotr.; FILATOVA, M.V., nauchn. sotr.; NIKITIN, G.N., nauchn. sotr.; ROMASHOV, A.I.; GODINER, F.Ya., red.

[Recovery and use of secondary wool in consumers' goods] Poluchenie i primenenie vtorichnoi shersti v izdeliiakh narodnogo potrebleniia. [By] S.M.Avirom i dr. Moskva, Izd-vo "Legkaia industriia," 1964. 260 p. (MIRA 17:5)

1. Nachal'nik pryadil'nogo tsekha Pushkinskoy fabriki No.13 (for Romashov).

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV V.A.

68-1-9/22

AUTHORS: Amstislavskiy, D.M., Kovalevskiy, S.Ye., and Zotov, V.A.

TITLE: Experimental Automation of Measuring Temperatures in the Control Heating Flues of Coke Ovens (Opyt avtomatizatsii izmereniya temperatur v kontrol'nykh otopitel'nykh kanalakh koksovykh pechey)

PERIODICAL: Koks i Khimiya, 1958, No.1, pp. 35 - 39 (USSR)

ABSTRACT: Experiments on the application of stationary recording pyrometers for measuring temperatures in the coke oven control heating flues carried out on the Zhdanov Coke Oven Works are described. The diagram of the installation is shown in Fig.1. Radiation pyrometers enclosed in water-cooled jackets (Fig.2) were placed in specially made shafts on the top of the battery over the 4th control flue on the coke and pusher sides on every 10th oven. The optical part of pyrometers was kept clean by a stream of air. The recording equipment was placed in the control room. Examples of records obtained are given in Figs. 3-6 and Tables 1-4. Causes of the variation of the temperature in the control flue during the coking period are discussed: before pushing the temperature reaches maximum, after the oven is pushed and recharged, the temperature falls to a minimum and rises again to a maximum, then falls again on charging the neighbouring oven, reaches the second minimum

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68-1-9/22

Experimental Automation of Measuring Temperatures in the Control Heating Flues of Coke Ovens.

(higher than the first minimum) and rises again to a maximum before the oven is pushed (Fig.6,1- descending stream, 2 - ascending stream). The results obtained indicated that an automatic measuring of temperatures in the control flues is possible. There are 4 tables and 6 figures.

ASSOCIATION: Zhdanov: Coke Oven Works (Zhdanovskiy koksokhimicheskiy zavod)

AVAILABLE: Library of Congress

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

CA

Preparation of analytical solutions of tanning extracts from large quantities of the solid extract. V. A. Zotov and S. S. Martynova. *Laboratorno-Chimicheskaya Prom. U. S. S. R.* 12, No. 4, 55(1939); *Chem. Zentr.* 1939, II, 2004.—In dissolving 100-200 g. of tanning ext. and dil. to 0.5 to 1 l., the soln. becomes turbid owing to the pptn of phlobaphenes. It is recommended to dissolve 81 g. of the ext. in 5 vols. of hot water and to boil the mixt. on a water bath for 15 min. to complete solution, to transfer to a 2-l. measuring flask cooling on the water bath to 21°, to fill to the mark with cold water, to mix thoroughly, to transfer 400 cc. to a second flask and to dil. with boiling water to 2 l. The turbidity is thus eliminated. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

CA

29

Rapid determination of the moisture content in dry tanning extracts. V. A. Zotov. *Kozhevenno-Obuvnaya Prom. S. S. S. R.* 18, No. 11, 34-5 (1939). An ext. sample derived from the "Kestner" extn. app. is cooled to room temp., cut into shavings and weighed on an analytical balance. The H_2O detn. is then carried out in a Dean and Stark app. with xylene or gasoline as solvent.

A. A. Bochtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

29

Determination of moisture in solid tanning extracts.
V. A. Zotov. *Kozhevenno-Obuvnaya Prom. S. S. S. R.* 19, No. 1, 26-7(1940); cf. C. A. 34, 7051[9].—A review of known methods. A. A. Boehlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

CA

25

Rapid barite method for the determination of tannin

I. V. A. Zolov. *Ac kremna Obrazov Prom. N. S. S. R.* 19, No. 9-10, 24-5(1949). The volumetric barite method is recommended to replace the AB-1 uses method with hide powder. This will eliminate the use of filter paper and hide powder. There will be an excess of reagents combining with the tannin and consequently tannin will be ppt. from analytical soln. Moreover, in this case pure reagents are used, which is not the case with hide powder. The barite numbers detd. by the volumetric method coincide with those obtained with Mohr's salt.

A. A. Bochkinok

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ASEYEV, Georgiy Mikhaylovich; ZOTOV, Veniamin Alekseyevich;
KUKOLEVSKIY, G.M., red.; ROMANOVA, Z.A., tekhn. red.

[Medical control of the physical education of students]
Vrachebnyi kontrol' za fizicheskim vospitaniem studentov.
Moskva, Medgiz, 1963. 193 p. (MIRA 16:7)
(SPORTS MEDICINE) (COLLEGE SPORTS)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

YESTUTIN, Leonid Sergeyevich; BUSHIN, V.P., retsenzent; ZOTOV, V.A., retsenzent; MEDVEDEV, P.I., retsenzent; EYZERMAN, V.L., retsenzent; REGEL'SON, L.M., kand. tekhn. nauk, dots., red.; DOZORTSEVA, Ch.I., red.

[Elements of antenna and wave-guide systems] Elementy antenno-volnovodnykh ustroistv. Moskva, Izd-vo Mosk. univ., 1964. 102 p. (MIRA 17:11)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

[illegible], V.I.; KASPAROVA, S.A.; KONOROVA, Ye.V.; KOPSHITSER, I.Z.; LARIONOV, V.P.; SVIDLO, V.M.; FOL'TS, K.K.; ZOTOV, V.A., red.

[Exercise therapy in the psychiatric hospital] Lechebnaia fizicheskaia k-l'tura v psikhiatricheskoi bol'nitse. Moskva, Meditsina, 1965. 235 p. (MIRA 18:8)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

CHERNOV, I.S.; POYARKOV, A.A.; ZOTOV, V.A., kand. veter. nauk (Smolenskaya oblast'); KRYUCHKOV, I.I., starsh'y veterinarnyy vrach

Prophylaxis of dictyocaulosis in cattle; a selection of articles. Veterinariia 41 no 4:45-48 Ap '65. (MIRA 18:6)

1. Upravleniya veterinarii Ministerstva sel'skogo khozyaystva RSFSR (for Chernov). 2. Nachal'nik veterinarnogo otdela Smolenskoy oblasti (for Poyarkov). 3. Zavedoyushchiy Rzhevskoy veterinarnoy laboratoriyey Kalininskoy oblasti (for Kryuchkov).

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V. A.

Moscow Veterinary Academy, Min Higher Education USSR

ZOTOV, V. A.- "An experiment in curing ruminant agricultural animals of the basic helminthoses under the conditions of the enlarged kolkhoz in Moscow Oblast." Moscow Veterinary Academy, Min Higher Education USSR. Moscow, 1956. (Dissertation for the Degree of Candidate in Veterinary Sciences)

SO: Knizhnaya Letopis' No. 20, 1956

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.A.

USSR

Classification of packing devices. Standartizatsiia 26 no.9:17-21 S '62. (MIRA 15:9)
(Packing (Mechanical engineering))

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.A., inzh.

Investigation of helical ring sealings. Vest.mashinostr. 44 no.1:7-12 Ja '64. (MIRA 17:4)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

KUNIN, Samuil Karpovich; ZOTOV, V.A., redaktor; PETROVA, M.D., tekhnicheskiy redaktor

[Problems of pre-school hygiene] Voprosy doshkolnoi gigieny. Moskva, Gos. uchebno-pedagog.izd-vo Ministerstva prosveshcheniia RSFSR, 1954. 212 p. (MLRA 8:5)
(Children--Care and hygiene)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

KAZAKOV, B.N., kandidat veterinarnykh nauk; ZOTOV, V.A., aspirant.

Intramuscular carbon tetrachloride injections in fascioliasis in sheep. Veterinariia 32 no.8:50-52 Ag '55. (MLRA 8:10)

1.Nadterechnaya rayvetlechebnitsa, Groznenskoy oblasti.
(VETERINARY MATERIA MEDICA AND PHARMACY)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V. A.

Tanning

Efficient method of extracting tanbark material. Leg. prom. 12 No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

BC

BIO

Determination of water content of solid hydrated minerals. V. A. Zakon. Uspekh. Khim. Zhur. 1940, No. 1, 88-97.—The method of Dean and Stark is preferred. H. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

BC

B-2-10

Rapid determinations of water by sampling. [illegible] Y. A. Zorov (Kosh. Oderd. Prom., 1939, No. 11, 34—35).—The H_2O content is conveniently determined by Dean and Stark's method. B. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

Preservation of oak extract. M. I. Karpman and V. A. Zotov. *Lesnaya Prom.* 11, No. 6, 43(1951).—Satisfactory preservatives in open storage are 2% β-naphthol, 0.5% HgI_2, and 1% chloramine by wt. of the liquid ext. The HgI_2 is mixed with an equal amt. of KI before adding. Preservation with *p*-dichlorobenzene, Na_2SO_3, chloroform, formalin, xylene, and DDT proved unsatisfactory. In air-tight containers, satisfactory preservatives are β-naphthol 0.25, HgI_2 0.1, Na_2SO_3 1, HCHO 0.3, and chloramine 1% by wt. of liquid ext. B. Z. Kamich

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

L 21766-66 EWT(1)/EWA(h)

ACC NR: AP6002873 SOURCE CODE: UR/0286/65/000/024/0035/0035

AUTHOR: Zotov, V. A.

ORG: none

TITLE: A method for automatic frequency trim of superhigh frequency oscillators (resonators). Class 21, No. 176954

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 35

TOPIC TAGS: oscillator, superhigh frequency, frequency selection, automatic frequency control

ABSTRACT: This Author Certificate presents a method for automatic fine tuning of the frequency of oscillators (resonators) of the superhigh frequency range with the use of a periodically retuned frequency selection device. This design eliminates the automatic fine tuning high frequency standard from the circuit. The automatic frequency trim is accomplished by setting and maintaining as constant the time intervals between the successive selections of the frequency selection device. The selections are retuned with a constant average rate. The automatic fine tuning is also accomplished by setting and maintaining the harmonics of the stabilized

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UDC: 621.316.726.1

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

L 21786-66
ACC NR: AP6002873

oscillator (resonator). The frequency of the stabilized oscillator (resonator) is changed by altering the magnitude of the fixed time interval with a constant rate of retuning of the frequency selection device. The frequency can also be changed by altering the tuning rate of the frequency selection device with a constant value of the fixed time interval.

SUB CODE: 09/ SUBM DATE: 27Nov64

Card 2/2 UL

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.A.

Effect of the physicomechanical properties of shrub stems on their cutting. Nauch. trudy AKKH no.32:205-216 '64.

Selecting the optimum shape of the cutting edge in supportless cutting. Ibid.:217-224 (MIRA 19:1)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

AKHMEDBABAYEV, M.Kh.; ARIFDZHANOV, K.A.; BELOUSOV, N.A.; BELYAKOV, S.P.; ZOTOV, V.G.; ISAYEVA, Z.D.; MAKHMUDOV, I.A.; ISHCHENKO, F.S.; KRASIL'NIKOV, Ya.A.; NIKOL'SKIY, I.P.; NETSETSKIY, A.M.; PERGAT, F.F.; PAVLOVSKAYA, M.D.; SAMSONOV, L.S.; POLIZHAYEV, A.I.; SMIRNOV, F.Ye.; SABININ, M.N.; SHUTYAYEV, N.A.; CHIZHIK, V.I.; KARPENKO, P.M.; IMEROV, A.I.

Mikhail Aleksandrovich Nenetskii; obituary. Veterinariia 37 no.10:94 O '60. (MIRA 15:4)
(Nenetskii, Mikhail Aleksandrovich, 1899-1960)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

BURAKOV, Ye.B., inzh.; ZOTOV, V.G., inzh.; NESTEROV, A.A., inzh.; SHAMRAY, B.V., kand.tekhn.nauk

Magnetic-transistor amplifier for a thermal e.m.f. to d.c. converter. Izv. LETI no.45:194-200 '61. (MIRA 16:5)
(Electric current converters) (Telemetering)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

39213
S/263/62/000/007/012/014
I007/I207

AUTHOR: Burakov, E. B., Zotov, V. G., Nesterov, A. A. and Shamray, B. V.

TITLE: Magnetic semiconductor amplifier for the conversion of thermoelectromotive force into d.c. voltage

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. Izmeritel'naya tekhnika, no. 7, 1962, 49, abstract 32.7.318. "Izv. Leningr. elektrotekhn. in-ta", no. 45, 1961, 194-200

TEXT: Description is given of a magnetic semiconductor amplifier for conversion of thermoelectromotive force into d.c. voltage according to the a.c. amplifying method. The amplifier consists of three components—modulator, a.c. amplifier and rectifier. The modulator is a magnetic voltage amplifier with a double-frequency output, permitting separate adjustment of modulus and phase in the a.c. windings, and hence equalization of odd (uneven) harmonics. The modulator is fed from a semiconductor RC-generator of 8.5 kcs. At an input voltage of about 4 to 5 Mv, the amplifier has satisfactory linear characteristics. The output resistance is 70 ohms, the sensitivity 10 microvolts and the voltage amplification 4000 volts. The amplifier is designed for a load of 4000 ohms.

[Abstracter's note: Complete translation.]

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.D., starshiy operator blyuminga.

New flowsheet for rolling on blooming mills. Metallurg 3 no.12:37-38 D '58. (MIRA 11:12)

1.Zavod "Krasnyy Oktyabr'."

(Rolling mills)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

AUTHOR: Zotov, V.D. SOV/130-58-12-17/21

TITLE: New Rolling Schedule for a Blooming Mill (Novaya skhema prokatki na blyuminge)

PERIODICAL: Metallurg, 1958, Nr 12, pp 37-38 (USSR)

ABSTRACT: The author states that his shift have increased blooming-mill productivity by 8% since 1955 by adopting a new schedule, which he outlines. A three-man crew is used and their work and that of the mill has been organized so as to reduce idle time, one of the innovations being proposed by the author. He considers that reserves of productivity remain.

ASSOCIATION: "Krasnyy Oktyabr'" works

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, Vasiliy Fedorovich; YARTSEV, N., red.; KUZNETSOVA, A., tekhn. red.

[Lamochkin's brigade assembles houses] Montazh vedet brigada Lamochkina. Moskva, Mosk. rabochii, 1961. 26 p. (MIRA 15:3)
(Building)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

PROSHLYAKOV, A.I.; ZHELEZNYKH, V.I.; BYCHEVSKIY, B.V.; ZOTOV, V.F.; LYAMIN, N.I.; IVANOV, D.S.; BLAGOSLAVOV, B.V.; BARANOV, N.P. PANKOV, M.A.; OGORODNIKOV, V.A.; FILONENKO-BORODICH, M.M.; IL'YASEVICH, S.A.; RABINOVICH, I.M.; OLISOV, B.A.; DAVYDOV, S.S.; ZIMIN, D.D.; SHPERK, B.F.; USKOV, V.N.; BUZNIK, P.K.

Boris Aleksandrovich Olivetskii; obituary. Voen.-inzh.zhur. 101 no.12:42 D '57. (MIRA 10:12)
(Olivetskii, Boris Aleksandrovich, 1896-1957)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.G., veterinarnyy vrach

From the practices in the use of biogenic stimulators. Veterinariia 38 no.3:29 Mr '61 (MIRA 18:1)

1. Uzbekskaya respublikanskaya veterinarnaya laboratoriya.

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V. G. (Veterinary Surgeon, Veterinary Laboratory of the Republic, Uzbek SSR).

"Experience in the utilization of biogenic stimulants."

Veterinariya, Vol. 38, No. 3, 1961, p. 29.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.I.

Interaction of monoammines of aluminum bromide and iodide with certain metals. Ukr.khim.zhur. 19 no.5:473-478 '53. (MLRA 8:2)

1. Kiyevskiy politekhnicheskiy institut, laboratoriya neorganicheskoy khimii.
(Aluminum halides) (Ammines)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.I., inzh.; YAKOBSON, G.I., inzh.

Concerning the construction of the boiler chasis within the framework of the boiler plant. Elek. sta. 32 no.2:87-89 F '61. (MIRA 16:7)

(Boilers)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

UDOVENKO, V.V.; ZOTOV, V.I.

Interaction of mercury (II) halides with monoethanolamine halohydrates. Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.4:543-545 '63.(MIRA 17:2)

1. Kiyevskiy politekhnicheskiy institut .Kafedra obshchey i neorganicheskoy khimii.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.I., inzh.

Effect of transverse nonsymmetry on the threshold of the static stability of a simple electrical system. Izv. vys. ucheb. zav.; energ. 9 no.1:1-8 Ja '66. (MIRA 19:1)

1. Dal'nevostochnyy politekhnicheskiy institut imeni V.V. Kuybysheva. Predstavlena kafedroy elektricheskikh sistem. Submitted November 26, 1964.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

[illegible] I.A., [illegible] Arkhangel'skiy, [illegible]

Effect of nonmagnetic and intermediate load impedance on the stability of interconnection couplings. Elektrichestvo no.5[illegible] My '65.
(MIRA 18:6)

1. Moskovskiy energeticheskiy institut.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

Z

31.52 ZOTOV. V. I. AND ASTAKHOV, A. I.

Zanimatel'naya Khmiya. Kiev, "Molodv." 1954. 135. (5) s.s. ill. 23 sm.
30.000 Ekz. 3 R. 80K. Vpier.- Na ukr. Yaz. (54-56722) 54-542.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V. I.

5391. Zotov, V. I. Parkticheskiye raboty i uprazhneniya po obshchey khimii. (Ucheb. posobiye dlya vyssh. ucheb. zavedeniy Ukr. SSR) Pod red. Yu. K. Delimarskogo. Kiyev," Rad. shkola", 1954. 264 s. s ill. 23 sm. 5 ekz. 6r. 70 k. V. per.---Na ukr. yaz. (55-659) 54 (076.5)

SO: Knizhnaya Letopis', Vol. 1, 1955

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.I.

Zotov, V.I., Zubkov, A.P., and Chizhevskiy I.T. (Mil. Vet. Lab No 413)

"Portable Unit 'VL-413' for Determination of Sulfur Dioxide in Gas Chambers,"

SO: Veterinariya, Vol 20, No 2, 1943.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

L 08082-67 EWT(1) TT/AT SOURCE CODE: UR/0143/66/000/008/0001/0009

ACC NR: AP7001674

AUTHOR: Zotov, V. I. (Engineer)

ORG: Far Eastern Polytechnical Institute im. V. V. Kuybyshev (Dal'nevostochnyy politekhnicheskikh institut)

TITLE: Influence of automatic control of excitation on static stability of an electrical system in an asymmetrical operating mode

SOURCE: IVUZ. Energetika, no. 8, 1966, 1-9

TOPIC TAGS: automatic control technology, electric generator

ABSTRACT: An attempt to investigate the influence of an asymmetrical operating mode on the stability limit of a system of automatic control of generator excitation. The work analyzes a simple system -- a generator operating through a passive quadrupole into conductors of unchanging voltage. The system is assumed ideally stabilized. It is determined that if the generator is equipped with automatic excitation control of current deviations, the determination of the transmitted power limit in an asymmetrical operating mode using only the direct sequence components can lead to a considerable error. The appearance of an asymmetrical operating mode with this type of generator is equivalent to an increase in the amplification coefficient depending on the degree and type of asymmetry. Orig. art. has: 5 figures, 20 formulas and 1 table. [JPRS: 38,490]

SUB CODE: 13, 09 / SUBM DATE: 01Mar65 / ORIG REF: 006

UDC: 621.310.016.351

Card 1/1 pb

0924 1442

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

VLADZIYEVSKIY, A.P., doktor tekhn. nauk; ZOTOV, V.K.; ZUZANOV, G.I.; PEREPELITSEY, P.G.; SVIRIDENKO, S.Kh.; SHCHEGOL'KOVA, L.I.; BORUSHMOY, I.V., red.; KOGAN, F.L., tekhn. red.

[Machine-tool industry in Italy; survey] Stankostroenie Italii; obzor. Moskva, TSentr. in-t nauchno-tekhn. informatsii mashinostroeniia, 1961. 172 p. (MIRA 14:9)

(Italy--Machine-tool industry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

GOLOVANOV, Yu.N.; BREZHNEVA, N.Ye.; OZIRANER, S.N.; YEREMIN, A.A.; ZOTOV, V.L.

Mechanism underlying high-temperature volatilization of ruthenium coprecipitated with various substances. Atom. energ. 15 no.3: 219-223 S '63. (MIRA 16:10)

(Ruthenium) (Evaporation)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

GOLOVANOV, Yu.N.; BREZHNEVA, N.Ye.; OZIRANER, S.N.; YEREMIN, A.A.; ZOTOV, V.L.

Dependence of the chemical stability and crystallization power of melted glass on its composition and the conditions of its preparation. Atom. energ. 15 no.2:130-138 Ag '63. (MIRA 16:8)
(Glass manufacture--Chemistry)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

SMIRNOVA, V.F., inzh.; ZOTOV, V.L., inzh.; Prinimali uchastiye: BELYAYEV, N.N.; OCHKASOVA, Z.P., inzh.

Coating of headwear with a nap finishing by means of the electrostatic method. Nauch.-issl. trudy TSNIISherstI no.17:124-126 '62. (MIRA 17:12)

1. Rukovoditel' laboratorii avotmatizatsii TSentral'nogo nauchno-issledovatel'skogo instituta sherstyanoy promyshlennosti (for Belyayev).

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

AUTHOR: Golovanov, Yu. N.; Krasovskiy, A. N.; Zotov, V. L.; Kuz'min, V. P.

TITLE: Deposition of tungsten from the vapor-gas phase

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 8, 1965, 1944-1950

TOPIC TAGS: metal vapor deposition, tungsten fluoride, tungsten

ABSTRACT: Investigations carried out by the authors for several years established the following: the reduction of WF_6 to metallic W over heated tungsten occurs only at 300°C or above. At lower temperatures, di- and tetra- and subfluorides of tungsten are deposited. In the [illegible] (gas phase) [illegible]

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

GOLOVANOV, Yu.N.; KRASOVSKIY, A.I.; ZOTOV, V.L.; KUZ'MIN, V.F.

Tungsten precipitation from the vapor-gas phase.
Zhur.neorg.khim. 10 no.8:1948-1950 Ag '65.

(MIRA 19:1)

1. Submitted December 19, 1964.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

TITOV, V.A.; ZOTOV, V.L.; MEDVEDEVA, S.F.

Corrosion and protection of the equipment of chemical plants.
Khim.prom. no.4:286-288 Ap '61. (MIRA 14:4)

1. Moskovskiy institut stali imeni I.V.Stalina.

(Chemical engineering - Equipment and supplies)
(Corrosion and anticorrosives)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

21783

18.8300 1138 1208 1454

S/064/61/000/004/003/003
B110/B207

AUTHORS: Titov, V. A., Zotov, V. L., Medvedeva, S. F.

TITLE: Corrosion and the protection of the equipment of chemical factories

PERIODICAL: Khimicheskaya promyshlennost', no. 4, 1961, 64-66

TEXT: Subject of the present study is the selection of a corrosion-proof metal for reaction vessels of melamine production at 250°C and 120 atm, and the rectification columns for the separation of hydrochloric acid and methanol (15.3% HCl; 22.8% H_2O and 61.9% CH_3OH). Ст-3 (St-3) vessels must be replaced after 1.5-2 months, since in melanine production their upper parts are affected by corrosion-active water-, ammonia- and hydrogen sulfide vapors. Zinc Ц-2 (Ts-2), cadmium (99.78% Cd), aluminum А-0 (A-0), Ст-3 (St-3), steel 1Х18Н9Т (1Kh18N9T) samples as well as of the nickel alloy ЭИ-461 (EI-461) castalloy, of the type "В" ("V") were suspended on fluoroplast threads in the circular space between the body of the reaction vessel and the melamine cartridge. Zinc showed the least

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stability, followed by cadmium with a corrosion of 127 g/m^2 in 107 hr, (Fig.). Aluminum was very stable (approximately 5 g/m^2 in 207 hr, depth index 0.09 mm/year), its stability is due to the good protective properties of its oxide layer, stainless steel 1Kh18N9T (depth index in 207 hr = 0.2 mm/year). ЭИ-461 (EI-461) were less stable (depth index in 207 hr = 0.87/year and St-3, 70 g/m^2 in 100 hr. It is suggested to line the St-3 reaction vessel with a ≤ 3 mm thick layer of 1Kh18N9T stainless steel. The following alloys were tested with respect to their suitability for rectification columns: the titanium alloys: ВТ-1 (VT-1); ВТ-3 (VT-3); ВТ-5 (VT-5); ВТ-10 (VT-10); the following titanium- and niobium alloys: ТН-3 (TN-3), ТН-27 (TN-27), ТН-50 (TN-50), ТН-75 (TN-75); sheet lead, the alloys ЭИ-461 (EI-461) and ЭИ-943 (EI-943). Tantalum and niobium as well as their above alloys showed only a weight increase of 0.001 g after a 100 hr test in the boiling mixture of hydrochloric acid and methanol. The protective films were closely connected with the metal surface. Tantalum develops probably a Ta_2O_5 protective film. After rolling cold hardened tantalum corrodes at a

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rate of 0.062 $g/m^2 \cdot hr$; 1.25 hr in vacuum of 10^{-4} mm Hg at 1200°C, tempered tantalum corroded at a rate of 0.010 $g/m^2 \cdot hr$. Corrosion (100 hr) was increased from 0.033 $g/m^2 \cdot hr$ to 0.040 $g/m^2 \cdot hr$ owing to inhomogeneities at the welding points. With respect to corrosion stability, the following order is maintained (Fig. 2): titanium alloy ВТ-1Д (VT-1D), (corrosion rate: 4.2 $g/m^2 \cdot hr$). A reduction of corrosion after some time could be hardly noticed. Since boiling, chemically aggressive media do not only electrochemically dissolve the metal, but destroy it due to erosion, there must be added a special protective substance to the metal with the exception of Ta, Nb and their alloys. 0.01; 0.02; 0.03, and 0.04 mole $CuCl_2 \cdot 2H_2O$ were added per 1 l as protective agent since the addition of semi-noble metals leads to the precipitation of metal islands, microvapor formation, and anodic surface passivation. An addition of 0.02 mole/l reduced the corrosion rate of ВТ-1Д (VT-1D) titanium alloy by the 17-fold to 0.247 $g/m^2 \cdot hr$. The electroprotecting method is therefore also convenient for other metals. TN-75 can be recommended for

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Corrosion and the protection ...

column lining as the cheapest among the extremely stable niobium- and tantalum alloys: TN-3, TN-27, TN-50, TN-75. There are 3 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina (Moscow Steel Institute im. I. V. Stalin)

Legend to the Table:
a) Titanium alloy;
b) chemical composition in %.

a) Сплав титана	b) Химический состав, %									
	Ti	C	Si	Cr	Fe	Al	H_2	N_2	O_2	W
BT-1	99,671	—	0,03	—	0,12	—	0,015	0,024	0,14	—
BT-3	92,49	0,03	0,09	2,54	0,2	4,6	0,01	0,02	0,02	—
BT-5	93,58	0,05	—	—	0,17	5,0	—	—	—	1,2
BT-10	97,795	0,005	—	—	0,5	—	—	0,02	0,08	1,6

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B110/B207

Corrosion and the protection ...

Legend to Fig. 1: Corrosion rate of various materials under the conditions of melamine production. 1) Zinc (Ts-2); 2) cadmium; 3) St-3; 4) EI-461; 5) 1Kh18N9T; 6) aluminum (A-0); a) time of experiment in hr; b) corrosion g/m^2.

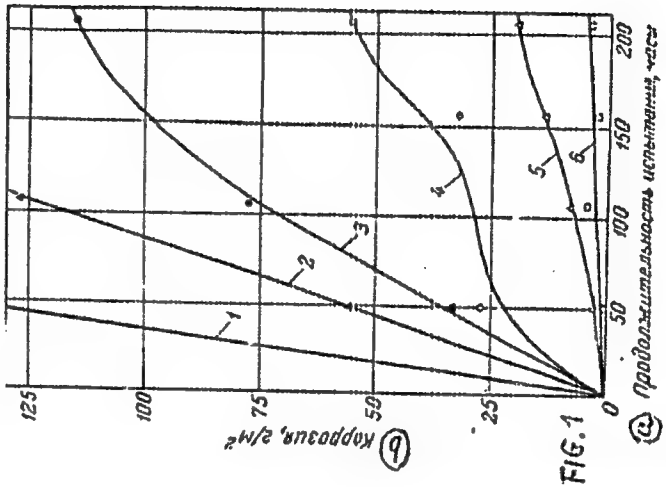

FIG. 1

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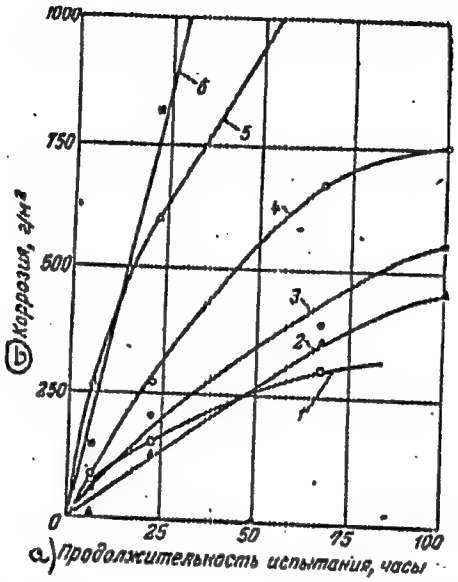
21783
S/064/61/000/004/003/003
B110/B207

Corrosion and the protection ...

Legend to Fig. 2: Corrosion rate of various materials in boiling HCl- and CH_3 mixture.
1) VT-1D; 2) EI-943; 3) VT-5; 4) VT-1; 5) Pb; 6) VT-3; a) time of experiment, hr; b) corrosion g/m^2.



Card 6/6

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GUSEVA, V.A.; ZOTOV, V.P.; KLEBANOV, M.K.; TSLAF, M.Ya.

Analog control systems for drilling machines. Mashinostroitel' no.7:6-8 Jl '63. (MIRA 16:9)
(Drilling and boring machinery--Numerical control)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

GOLOVANOV, Yu.N.; BREZHNEVA, N.Ye.; OZIRANER, S.N.; YEREMIN, A.A.; ZOTOV, V.L.

Mechanism underlying the volatilization of cesium coprecipitated with double nickel and potassium ferrocyanide at high temperatures. Atom. energ. 15 no.3:261-262 S '63. (MIRA 16:10)

(Ferrocyanides) (Cesium)

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[illegible]

[illegible] H. [illegible], [illegible], [illegible], [illegible], A. A.,

TITLE: [illegible] evidence of the chemical durability and crystallization capacity of [illegible] vitrified and devitrified method

SOURCE: Atomnaya energiya, v. 15, no. 2, 1963, 130-136

TOPIC TAGS: fission product, fission-waste disposal, radioactive-isotope dis- [illegible] radioactive waste disposal [illegible] chemical durability glass-melting [illegible] boron borosilicate, [illegible] devitrified, [illegible]

[illegible] and radioactive-waste disposal a study was made [illegible]

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L 17693-63

ACCESSION NR: AP3005221

purpose a powdered model composition (powder) consisting of $Fe(OH)_3$, $Na_2U_2O_7$ and $Na(OH)_2$, with a ratio of $Fe_2O_3/Na_2U_2O_7/CaO$ = 1:2:1, was used in certain ratios [illegible] glass-forming additives, such as sand and soda. For preparation of a series [illegible] the powder mixture to neutral [illegible] alkali metals. The temperature of the [illegible] was 700, and the heating time [illegible]. The optimum melting temperature, time, and powder-to-additive ratio depend on the ability of heavy-metal oxides to form glass with the additives. This ability depends on the viscosity of the [illegible] which in turn depends on the [illegible] and Na_2O content. It was found that a [illegible] additive ratio of [illegible], a melting temperature of 1300C and melting [illegible] heavy [illegible] and Na_2O [illegible] Further experiments were conducted in order to decrease the melting temperature by replacing SiO_2 with fluxes such as B_2O_3 (as boric acid). A decrease of 150C in melting temperature was achieved. Attempts to enhance the chemical durability [illegible] glass by introducing Al_2O_3 failed. Thus the optimum conditions for

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L 17533-63
ACCESSION NR: AP3005221

manufacturing the required glass could be summarized as follows: melting temperature, 1050C; melting time, 3—6 hr; ratio of powder to additive, 1.85; and composition of the additive, [illegible] Na_2O, and [illegible] B_2O_3. The resulting glass contained [illegible] SiO_2, [illegible] Na_2O, and [illegible] B_2O_3. The chemical durability of this glass was compared, through testing with the previously mentioned media, [illegible] the durability of glass used for manufacturing chemical-resistant laboratory [illegible] better in [illegible] can be explained by [illegible] of the effect of annealing temperature [illegible] that varying the [illegible] content can [illegible] by crystallization. Radiation [illegible] the crystallized phase [illegible] $Na_2O \cdot Al_2O_3 \cdot SiO_2$. The chemical durability [illegible] in the acid medium than that of the original [illegible] because of increased crystallization. [illegible] and [illegible]

Card 3/4

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.L.

Using cavitation-effect machinery for making reprocessed fibers. Tekst.prom. 20 no.10:17-18 O'60. (MIRA 13:11)
(Textile fibers) (Textile machinery)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.L., starshiy nauchnyy sotrudnik

Hydraulic method of scutching fibrous materials. Tekst.prom. no.2:23-24 F '63. (MIRA 16:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy promyshlennosti (TSNIIShersti).
(Rags) (Textile industry--Hydraulic equipment)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

GEL'MAN, A.S.; GRINEVICH, G.P., prof.; GRINEVICH, G.G.; ZOTOV, V.P.; KOMAROV, G.V.; PAVLOV, S.M.; FIRMON, A.V.; TRUBIN, V.A., glav. red.; SOSHIN, A.V., zam. glav. red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; KHOKHLOV, B.A., red.; ZIMIN, P.A., red.; KROMOSHCH, I.L., inzh., red.; NAUMOVA, G.D., tekhn. red.

[Handbook on loading, unloading, and conveying operations in construction] Spravochnik po pogruzochno-razgruzochnym i transportnym rabotam na stroitel'stve. Pod red. G.P.Grinevicha. Moskva, Gosstroiizdat, 1962. 376 p. (MIRA 15:9)
(Material handling) (Building materials)

ZOTOV, V.P.
"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

Nov 48

USSR/Engineering
Welding Machines
Aluminum Welds

"Accumulated Energy Welding," V. P. Zotov, Cand Tech Sci, Ind Inst imeni Kuybyshev, 3 pp

"Elektrichestvo" No 11

Results of theoretical and experimental investigation conducted to clarify number of problems arising in connection with operation of welding machines which work on principle of accumulated energy. This method, which consists of using either the energy of a charged condenser or a magnetic field, is used mainly in welding aluminum and light alloys.

27/49T53

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Electrical Engineering Abstracts
May 1954
Electric Waves and Oscillations

1080. Energy diagram of magnetically coupled circuits. V. P. Zorin. *Elektrichestvo*, 1953, *No.* 11, 61-4. *In Russian.*

When magnetically coupled circuits are analyzed theoretically by the well-known differential equations, great difficulties are encountered if a variable resistance is contained in at least one of the circuits. In such a case the investigation is best carried out by means of an energy diagram which is very simple to plot from the curve $i_1 = f(i_2)$ in rectangular coordinates. This curve may be derived from current oscillograms, or directly obtained by a single-beam oscillograph to the Y-plates of which a voltage proportional to i_1 is applied, whereas a voltage proportional to i_2 is fed to the X-plates. The position of any point of the curve fully determines the energy content of the main flux as well as leakage fluxes, in other words, of the fluxes linking with the inductances of one and of both circuits, respectively, and also the energy exchanges between the circuits. A numerical example shows the application of the energy diagram to electromagnetic welding.

B. F. KRATIS

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SOV/112-57-9-18581

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 9, p 67 (USSR)

AUTHOR: Koz'minykh, D. V., Zotov, V. P.

TITLE: Electric Braking of Hydroelectric Generators for Increased Stability (Elektricheskoye tormozheniye gidrogeneratorov s tsel'yu povysheniya ustoychivosti raboty)

PERIODICAL: Sb. nauch. tr. Kuybyshevsk. industr. in-t, 1956, Vol 1, Nr 6, pp 87-89

ABSTRACT: A system of artificial electric braking of hydroelectric generators is considered. If the three-phase stator winding and the excitation winding of a synchronous generator are made of two parallel branches placed at the double pole pitch apart, then two independent electrical systems will be formed in the generator and their currents will be superimposed. If the currents in both parallel branches of the rotor are equal, the generator will operate under normal conditions. If the current in one of the excitation branches decreases and the other correspondingly increases, difference EMFs will be introduced in the

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.P., dotsent.

"Electric machines." P.S. Sergeev. Reviewed by V.P. Zotov. Elektrichestvo no.2:95-96 F '56. (MLRA 9:5)

1. Kuybyshevskiy industrial'nyy institut imeni Kuybysheva. (Electric machinery) (Sergeev, Petr Sergeevich, 1898-)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

SOKOLOV, K.M. YEVSTAFEYEV, S.V.; ROSTOTSKIY, V.K.; STANKOVSKIY, A.P.; VARENIK, Ye.I.; ONUFRIYEV, I.A.; SVESHNIKOV, I.P.; UKHOV, B.S.; BAUMAN, V.A.; BARSOV, I.P.; BASHINSKIY, S.V.; BOYKO, A.G.; VALUTSKIY, I.I.; ZAPOL'SKIY, V.P.; ZOTOV, V.P.; IVANOV, V.A.; KAZARINOV, V.M.; LEVI, S.S.; MALOLETKOV, Ye.K.; MERENKOV, A.S.; MIROPOL'SKAYA, N.K.; OSIPOV, L.G.; PEREL'MAN, L.M.; PETROV, G.D.; PETROV, N.M.; POLYAKOV, V.I.; VATSSLAVSKAYA, L.Ya.; VAKHRAMEYEV, S.A.; VERZHITSKIY, A.M.; VLASOV, P.A.; VOL'FSON, A.V.; VOSHCHININ, A.I.; DZHUNKOVSKIY, N.N.; DOMBROVSKIY, N.G.; YEPIFANOV, S.P.; YEFREMENKO, V.P.; ZELICHENOK, G.G.; ZIMIN, P.A.; POPOVA, N.T.; ROGOVSKIY, L.V.; REBROV, A.S.; SAPRYKIN, V.A.; SOVALOV, I.G.; SOSHIN, A.V.; STARUKHIN, N.M.; SUREN'YAN, G.S.; TOLORAYA, D.F.; TROITSKIY, Kh.L.; TUSHNYAKOV, M.D.; FROLOV, P.T.; TSIRKUNOV, I.P.

Andrei Vladimirovich Konorov; obituary. Mekh. stroi. 16 no.1:32 Ja '59. (MIRA 12:1)

(Konorov, Andrei Vladimirovich, 1890-1958)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.P., kand.tekhn.nauk

Calculating a parabolic interpolator. Mashinostroenie no.2:82-83 Mr-Ap '62. (MIRA 15:4)

1. Kuybyshevskiy industrial'nyy institut.
(Interpolation)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.P., inzh.; NEKRASOV, K.S., nauchnyy red.; TABUNINA, M.A., red. izd-va; OSENKO, L.M., tekhn. red.

[Rigging operations at the construction site] Takelazhnye raboty na stroitel'noi ploshchadke. Moskva, Gos. izd-vo lit-ry po stroit., arkhit., i stroit. materialam, 1961. 178 p. (MIRA 14:10)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.
(Hoisting machinery) (Materials handling)